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THE DERMATOLOGIC ASPECTS OF LEPROSY

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In undertaking a brief presentation of the dermatologic side of leprosy there stands out the prime question: From what point of view? To a mixed audience, not technically trained in terms of dermatology, the subject must appeal most from the diagnostic point of view, and in this apprehension of the subject a brief synopsis of salient skin leprosy is to be presented.

There is no stereotyped classification of leprosy, and even when the attempt is made to make distinctive groups of types of the disease the exceptions are more numerous than the rule.

It is easier to study the skin evidences of leprosy on the presenting lesions than to try to fix the types in which any complex of symptoms may be looked for. On this basis, then, we may speak of macular leprosy, tubercular leprosy, bullous leprosy, pigmentary leprosy, nodose leprosy, scaling leprosy, ulcerative leprosy; and as aberrant occurrences, atrophic leprosy, mutilating leprosy and papular leprosy.

MACULAR LEPROSY

Macular leprosy may occur in three forms. First, as an expression of a general impression of the individual carrying a circulating infection of the disease and its organism. Such an eruption is evanescent; it has all the characteristics of an erythema multiforme of toxic type and the eruption is not characteristic of leprosy. Here the lesions are of various sizes, bilateral and symmetric, general over the whole body, and are light red, level with the skin, fade on pressure, have no fixed pigment and may be quite hyperesthetic so far as itching, heat and hypersensibility are concerned. Such macules may disappear entirely or they may continue *in situ*, giving grad-

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ual place to infiltrated and even nodose lesions in the same areas. More often they disappear and may recur months afterward. With such evidences the general symptoms of leprosy are associated.

Macular leprosy may be pigmentary from the start. Over the buttocks, hands, face and legs, particularly, the eruption shows in reddish-brown macules, more or less rounded in outline, level with the skin, and persistent in all of these characteristics.

The true type of macular leprosy is the most characteristic. Ovoid macules, varying in size, appear on the face, over the shoulders, over the arms and forearms, over the legs, more or less scattered, edges elevated and centers depressed; often the edges are highly pigmented, brown or purplish, and the center is of normal color or even a dirty white.

The last-named macules are anesthetic; the others are not. The anesthesia is more marked at the borders. More than this, in the borders of the last-named macules, it is usually easy to demonstrate the lepra bacilli; in the first two varieties of macules, it is almost impossible to find any bacilli—arguing, as has been suggested, that the eruption is rather an exanthem than a deposit.

Macular leprosy must be differentiated from syphilis, and from erythema multiforme. From the first the macules may be easily distinguished by their preference for the extensor surfaces, by their large size and by the peculiar dusky color in the pigmentary forms. Macular syphilis is not infiltrated.

From erythema multiforme, the diagnosis is made on the more established eruption, lasting weeks or months, and in the pigmentary and infiltrated types by the fact that in both the lesions do not fade on pressure. Sometimes iodism produces infiltrated lesions resembling leprosy, but here the whole lesion is turgescient and highly inflamed, and therefore red and not dusky-brown red.

TUBERCULAR LEPROSY

The tubercle of leprosy is of two forms.

The large tubercle is found about the nose, on the chin, cheeks, in the pendulous portion of the ear and sometimes on the hands and on the legs. The color of these lesions is characteristic—brown red. They are firm, rounded masses, deep set in the skin, not uniform in size and with no tendency to disintegrate while the general

condition of the patient is good. The lesions are almost invariably anesthetic.

Lupus and syphilis may be confused with this form of tubercle. In lupus the lesion is purple, granulomatous in consistency and ulcerating as soon as the tubercle is mature. The general symptoms in leprosy (nasopharyngeal and laryngeal, particularly) are ordinarily concomitant. In syphilis the tubercles are smaller, grouped in crescentic formation, and scar in ulcerating, with marked and characteristic pigmentation.

The small tubercle of leprosy is quite different. Here the lesions cluster close, like small pea-sized bits of bees-wax embedded in the skin. Over the backs of the hands, the chin, the borders of the lips and the cheeks are the sites of predilection. The lesions are a dirty yellow. This type of tubercular leprosy is usually rapid in its course, presumptively because the lesions in the skin are probably only the expression of a general tubercular condition of the viscera. These lesions are likewise anesthetic.

Only xanthoma and disseminate tuberculosis need to be considered in differentiation. Xanthoma presents flat tubercles, deep seated, bright yellow, smooth and usually lissom to the touch. Stretching the skin in xanthoma shows the streaks of connective tissue in the striae of the lesion; stretching the skin in leprosy only intensifies the waxy appearance of the tubercle. Xanthoma at times is painful; leprosy is anesthetic.

Tuberculosis of the miliary form may be disseminate in the skin and may be found in the areas in which tubercular leprosy is found. The lesions are in closer formation; usually occur as smaller tubercles and usually are found about the joints rather than at the peripheral extremities. Confusion often arises in these two conditions occurring on the face, but as the organisms of leprosy and of tuberculosis can be almost always demonstrated, this method, even carried to cultural procedure, will finally decide.

BULLOUS LEPROSY

Bullous leprosy must be noted as important, particularly as it is an early form. The lesions come on the hands or feet, over the joints of the fingers, as a rule. The bullae repeatedly occur at the same spot, until finally the epidermis is lost and bullae can not form.

Scarring, with mottling pigment, follows. Sometimes, necrosis supervenes and the deformity from loss of bones may result. This dermatologic evidence is really the expression of a disturbance in the nerve, usually the ulnar, along which may be found, when the bullae occur, marked thickening or even distinct nodosities along the sheath. But I am limited to cutaneous leprosy, so may not further digress.

PIGMENTARY LEPROSY

In some instances the local evidence of leprosy manifests itself in diffuse pigmentation of the face, neck, trunk, hands, arms and legs. At times the whole body may be so pigmented. The slight mottling is peculiar to this disease and makes the differentiation from the pigmentary evidences in vitiligo (in which the demarcation of color is abrupt), in Addison's disease (in which the pigment is solid and in selective areas), in syphilis (in which the mottling is limited to the neck) and in mycosis fungoides (in which the pigment is always cast over or under the premycotic furfuraceous scales).

NODOSE LEPROSY

Nodose leprosy is usually facial, coming on after the diffuse macular form has spread over the face and has persisted. As the skin thickens, rugosities develop and each of these separate into larger or smaller masses, forming nodes. At first there is some mobility, but this gradually disappears until a true satyriasis is established in the facies; and as the disease grows older and the skin roughens, there grows a more and more fixed condition of the skin, until the rugae resemble the thickened areas so characteristic of the lion's face and from which has been derived the term "leontiasis" as applied to this form of leprosy. Ulcers now ensue as a result of failure in nutrition, and one by one the features change by necrosis until the last stage of a fearful process may end the history of the case by death.

Hypertrophic rosacea, when general over the face, may resemble leontiasic leprosy, but at no time is the mobility lost, and the skin remains soft in spite of hypertrophy.

Chronic edema may likewise be mistaken for this disease, but in edema the smooth skin with the pitting over all areas makes a clear diagnosis, even if the complication of the keratinous changes in the eyes, and the ulcerative changes in the respiratory tract were not also in evidence to proclaim a more sinister diagnosis.

SCALING LEPROSY

Scaling leprosy is rare. Here the whole skin shows signs of degenerative change, and wrinkling is seen everywhere. No part of the body is free. Thinning instead of thickening occurs, and it is not hard to find the trophic changes of the skin accompanied by like changes in the peripheral nerves and in the mucous membranes of the nasopharynx. The conjunctivae are also involved and ectropion is common. The musculatory changes in the hands are also present and the peripheral nerve changes are found at the same time as the general scaling of the body. The skin everywhere has a dirty gray color, with lines of atrophy showing through the scales. The loss of hair over the pubis, in the axillae, over the body and of the eyebrows, lashes, beard and scalp carry further the picture of the atrophic process.

Xerosis in all its forms is easily differentiated by the consistent atrophy in the leprosy of this form. In xerosis the process is as consistently hypertrophic and the more severe the scaling in xerosis the more the tendency is to hypertrophic change.

ULCERATIVE LEPROSY

Ulcerative leprosy is nearly always found as an expression of nerve destruction and located on the sole of the foot, usually under the fleshy part of the great toe; it may occur at the heel. This ulcer, "neurotic ulcer" in type, is usually one of many symptoms of nerve leprosy, but as an ulcer it shows cutaneous evidence and must be mentioned here. The cylindrical cavity, sharply outlined, rather deep, and the hard and horny edges, with the nauseating odor, are sufficient to make a diagnosis.

ATROPHIC LEPROSY

Atrophic leprosy is also of nerve origin, but with cutaneous expression usually referred to the extremities. The whitlow, atrophy of the skin of the hands and feet, loss of intermediate phalanges resulting in superficial ulcers and in deformity, the scarring and pigmentation, all are the cutaneous evidences. Syringomyelia may be of other than leprous origin, but the altered or lost sensation, associated with peripheral lesions like the foregoing, the occurrence of contractures of the hand, of atrophy and of occasional bullae, should lead to a search for the bacilli for a differentiation.

When leprosy is advanced, all lesions may give way to degenerative changes, and tubercles or macules may break down, so that ulcerative leprosy may become general. The nasal bones break down; the lips excoriate and slough off; fingers drop; toes are spontaneously amputated; the legs or arms show areas of necrosis, and finally the terminal members one by one are made to fall until at last "the frame bears only semblance of its past, human once, but now distorted, bound in shapes fantastic and shorn of everything but form."

PAPULAR LEPROSY

In the various exacerbations of leprosy, particularly when the lesions begin to break down, when the toxins are liberated, or the masses of dead bacilli are sent into the circulation, there is frequently a rise of temperature, producing the "fever of leprosy," now recognized as an entity. With this process a general eruption appears of lenticular papules. This is the only form of papular leprosy so far known, and it is questionable if it may be properly called papular leprosy, as the papule is really only an evanescent exanthem, disappearing with the defervescence of the attack.

The papules are free of organisms and are purely exudative in type, inflammatory and hyperesthetic if the sensation is disturbed at all.

CONCLUSION

Much more might be said of cutaneous leprosy, but in the time allowed in a symposium of this sort it would be impossible to handle the subject exhaustively. The final word may be said that by learning the lesions which may be present in leprosy, it may be possible to recognize them by differentiation, while the attempt to carry pictures of classical descriptions may fail of service in the simple cases in which a diagnosis means so much in the matter of care and cure.

- 124 Baronne Street.

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